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FACSIMILE COMMUNICATION SYSTEM  
[Fakushimiri tsushinhoshiki]

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## 1. Name of this invention

FACSIMILE COMMUNICATION SYSTEM

## 2. Claim(s)

[1] Facsimile communication system which connects a host computer equipped with an external memory device to a facsimile device through a communication network and transmits a facsimile data file specified by the application program stored in said external memory device to said facsimile device using a facsimile control program installed in said host computer when a data transmission request is issued by the application program; wherein said facsimile control program comprises (1) a request-receiving means which receives a request for transmitting a facsimile data file stored in said external memory device to a facsimile device specified by said application program, (2) copying means which creates a file to said external memory device, copies the requested facsimile data file received by said request-receiving means to the created file, and deletes this new file at the end of file transmission, and (3) transmission means which transmits a copy of requested facsimile data file provided by said copy means to a specified facsimile device through said communication network.

\* Numbers in the margin indicate pagination in the foreign text.

### 3. Detailed explanation of this invention

#### [Industrial Field]

This invention pertains to a facsimile communication system which connects a host computer equipped with an external memory device to a facsimile device through a communication network and transmits the facsimile data file specified by the application program stored in the external memory device to said facsimile device using a facsimile control program installed in said host computer when a transmission request is issued by the application program.

#### [Conventional Technology]

With this type of conventional facsimile communication system, /328 an application program installed in a host computer issues a request to a facsimile control program installed in the same host computer for transmitting a facsimile data file stored in the external memory device to a facsimile device. Then, the facsimile control program, which has received this request directly accesses the facsimile data file held by the application program and transmits the file to the facsimile device specified by the application program.

#### [Problems to Be Solved by this Invention]

The above-mentioned conventional facsimile data file control method allows a facsimile control program to access the facsimile data file being used by the application program while the file is in transmission. Therefore, when an application program accesses the facsimile data file in the middle of transmission, the facsimile data

image at the time when the transmission request was made and actually transmitted facsimile data image may not be identical. To prevent this problem, access to the facsimile data file by the application program is disabled until the data is completely transmitted to a facsimile device specified by the application program. Therefore, the application program needs to wait for the completion of facsimile data file transmission for accessing the file.

The object of this invention is to provide a facsimile communication system, which can transmit exact facsimile data images existed at the time of transmission request even if the application program accesses the facsimile data file while the facsimile control program is transmitting the data to the facsimile device specified by the application program.

#### [Method to Solve the Problems]

To solve the above-mentioned problems, the facsimile communication system has a facsimile control program comprising (1) a request-receiving means which receives a request for transmitting a facsimile data file stored in said external memory device to a facsimile device specified by said application program, (2) copying means which creates a file to said external memory device, copies the requested facsimile data file received by said request-receiving means to the created file, and deletes this new file at the end of file transmission, and (3) transmission means which transmits a copy

of requested facsimile data file provided by said copy means to a specified facsimile device through said communication network.

[Operation]

Since a facsimile data file requested by an application program for transmission is copied onto a file created in the external memory device, and the copied file is transmitted to the facsimile device specified by the application program, even when the application program accesses the facsimile data file during the transmission process, the exact file data image existed at the time of transmission request made by the application program can be transmitted. Therefore, as disabling file access is unnecessary, the application program can freely access the data file during the facsimile transmission.

[Operational Example]

Hereafter, an operational example of this invention is explained by referring to Figures.

Figure 1 is a diagram showing the facsimile communication system based on this invention used in an operational example. Figure 2 is a diagram showing the configuration of the request-receiving means 7 exhibited in Fig. 1 and the relation of the application program 6 and copying means 8. Figure 3 is a diagram showing the copy means 8 exhibited in Fig. 1 and the relation of request means 7, external memory device 2, and transmission means 9. Figure 4 is a diagram showing the configuration of signal transmission means 9 exhibited in

Fig. 1 and the relation of copying means 8, external memory device 2 and facsimile device 4.

This facsimile communication system has a host computer 1 to which an external memory device 4 is connected. Also, a facsimile device 4 is connected to the host computer 1 through a communication network 3. The host computer 1 is equipped with a facsimile control program 5 and application program. Also, the facsimile control program 5 has a request-receiving means 7, copying means 8, and signal transmission means 9. The request-receiving means 7 performs data I/O with the application program 6 and copying means 8 and contains an application program request-receiving part 71, facsimile data file copy request part 72, and application program notification part 73. The copying means 8 performs data I/O with the request means 7, external memory device 2, and transmission means 9 and contains a facsimile data file copy reception part 81, facsimile data file copying part 82, facsimile data file copying completion notification part 83, and facsimile data file deletion part 84. The transmission means performs data I/O with the copying means 8, external memory device 2, and facsimile device 4 through the communication network 3 and contains a facsimile data file transmission reception part 91, facsimile data file transmission part 92, and facsimile data file transmission completion notice part 93. The facsimile data file 10 and file 11 are stored in the external memory device 2. /329

The application program 6 sends a request to the facsimile control program 5 for transmitting a facsimile data file 10 stored in the external memory device 2 to the facsimile device 4.

As shown in Fig. 2, when the application program request-receiving part 71 receives a facsimile transmission request sent from the application program 6, the request-receiving means 7 in the facsimile control program 5 creates a file for the facsimile data file 10 requested by the application program 6 into the external memory device 2, requests the copying means 8 to copy the file using the facsimile data file copy request part 72, and notifies the release of the facsimile data file 10 to the application program 6 when the application program notification part 73 receives a completion notice of copying the facsimile data file 10 sent from the copying means 8. As shown in Fig. 3, the copying means 8 operates the following processes: After the facsimile data file copy reception part 81 receives the facsimile data file copy request sent from the request-receiving means 7, the facsimile data file copying part 82 creates a file 11 in the external memory device 2 and copies the facsimile data file 10 requested by the application program for its transmission onto the file 11. When the data file 10 is completely copied onto the file 11, the facsimile data file copy completion notification part 83 notifies the request-receiving means 7 with its completion of facsimile data file copying. Also, simultaneous to this notification, the facsimile data file copy



completion notification part 83 sends the same notice to the transmission means 9 and requests the transmission of the file stored in the external memory device 2 to the facsimile device 4. When transmission of the file 11 to the facsimile device 4 ends, the facsimile data file deletion part 84 receives the transmission completion notice from the transmission means 9 and deletes the file in the external memory device 2 which is the facsimile data file being requested to be transmitted.

As shown in Fig. 4, the transmission means 9 receives the facsimile data file transmission request sent from the copying means 8 through the facsimile data file transmission reception part 91. The facsimile data file transmission part 92 transmits the file 11, which is the facsimile data file stored in the external memory device 2, to the facsimile device 4 through the communication network 3. Upon completion of the transmission to the facsimile device 4, the facsimile data file transmission completion notice part 93 notifies the transmission completion to the copying means 8.

As explained above, with the facsimile communication system in this operational example, the data file 10 needed to be transmitted by the application program 6 in the host computer 1 is copied to the file 11 and transmitted to the facsimile device 4. Therefore, even when the application program 6 accesses the facsimile data file 10 during the file transmission process, the facsimile data image

identical to the image existed when the transmission request was made can be sent to the facsimile device.

[Effect of this Invention]

As explained above, this invention provides a facsimile system /330 configuration in which the facsimile data file requested to be transmitted by the application program in the host computer is copied onto a file created in the external memory device and transmitted to the facsimile device specified by the application program. Therefore, the facsimile data image identical to the image existed at the time of transmission request can be sent to the facsimile device. Hence, the application program can access the facsimile data file without waiting for its transmission completion to a facsimile device, thereby being able to eliminate the inconvenience of waiting, thus improving the processing efficiency.

#### 4. Simple Explanation of Figures

Figure 1 is a diagram showing the facsimile communication system based on this invention used in an operational example. Figure 2 is a diagram showing the configuration of the request-receiving means 7 exhibited in Fig. 1 and the relation of the application program 6 and copying means 8. Figure 3 is a diagram showing the copy means 8 exhibited in Fig. 1 and the relation of request means 7, external memory device 2, and transmission means 9. Figure 4 is a diagram showing the configuration of signal transmission means 9 exhibited in

Fig. 1 and the relation of copying means 8, external memory device 2 and facsimile device 4.

1...Host computer; 2...External memory device; 3...Communication network; 4...Facsimile device; 5...Facsimile control program; 6...Application program; 7...Request-receiving means; 8...Copying means; 9...Transmission means; 10...Facsimile data file; 11...File; 71...Application program request-receiving part; 72...Facsimile data file copy request part; 73...Application program notification part; 81...Facsimile data file copy reception part; 82...Facsimile data file copy part; 83...Facsimile data file copy completion notification part; 84...Facsimile data file deletion part; 91...Facsimile data file transmission reception part; 92...Facsimile data file transmission part; 93...Facsimile data file transmission completion notification part

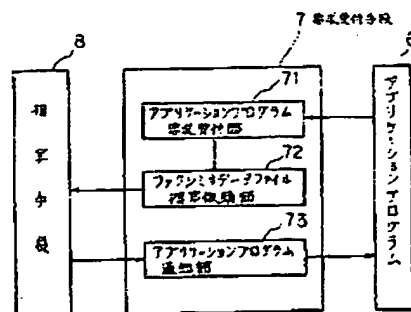


Figure 2

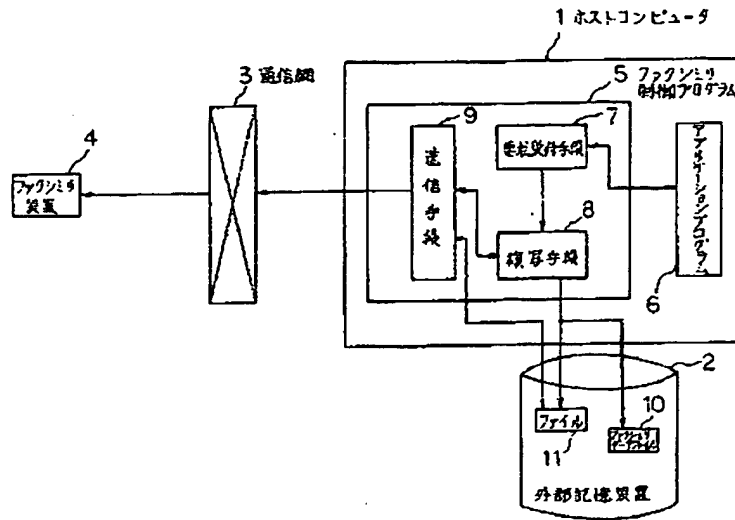


Figure 1

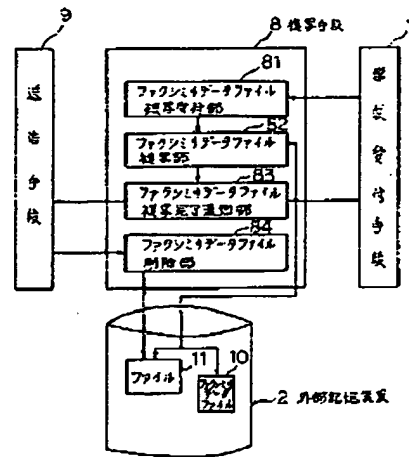


Figure 3

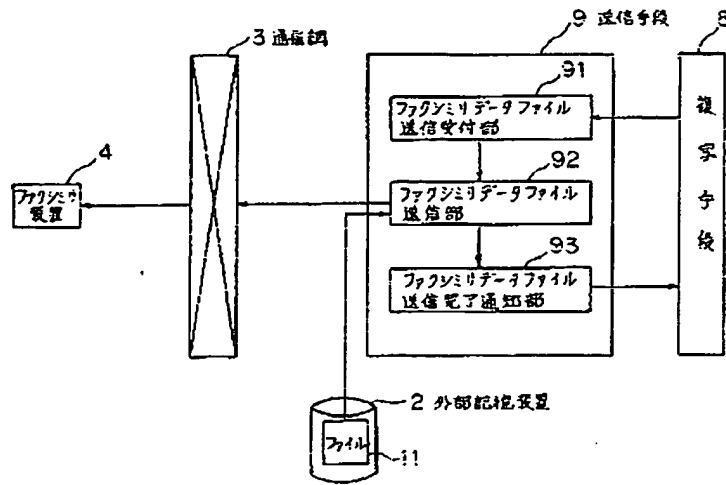


Figure 4

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